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SESSION ID: SAT-W02

Widening Our Lens on OSS Security: People, Practice, and Partnership

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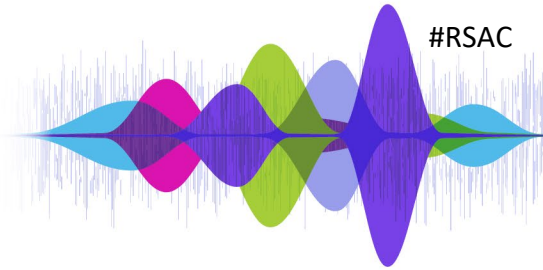

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Open Source is growing…

- **As a valued resource ->** *without OSS… firms would pay an estimated 3.5 times more to build the software and platforms that run their businesses.*
- **As an integrated part of systems and technology ->** 70-90% of any given software code base consists of OS elements.
- **In complexity and use ->** OS solutions are part of global internal security systems either knowingly or not.
- **With more contributors and projects ->** 5.2+ billion GitHub contributions to more than 518 million OS, public, and private projects in 2024.
- **In market size ->** from $41.83 billion (2024) -> $48.92 billion (2025).

https://octoverse.github.com
https://www.library.hbs.edu/working-knowledge/open-source-software-the-nine-trillion-resource-companies-take-for-granted
https://www.ibm.com/think/topics/open-source
https://www.thebusinessresearchcompany.com/report/open-source-software-global-market-report

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But there is still a lot of "mystery"…

A bit about me…

- President, Open Information Security Foundation (Suricata)
- Chief Trailblazer, Sightline Security
- Open Source Advisor and Board Member, Tenzir
- (former) Senior Director of Open Source, Corelight
- (former) Director of Communications, Tor Project
- Ph.D in Cybersecurity, Purdue University

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Looking Beyond the Myth

- **What People Think vs. What's True**
  - Often romanticized as a community of friendly coders working together for the common good.
  - Reality -> t's complicated—people, governance models, business interests, licensing restrictions, and security risks.
  - Securing OSS isn't just about the code—it's about the entire ecosystem that surrounds it.
- **Why This Should Matter to You**
  - OSS is everywhere—may organizations don't know how to harness it.
  - OSS is part of the supply chain—understanding how it actually works is essential for making good security decisions.

People - Practices - Partnerships

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PEOPLE
The Humans Behind the Code

The *messy* part!

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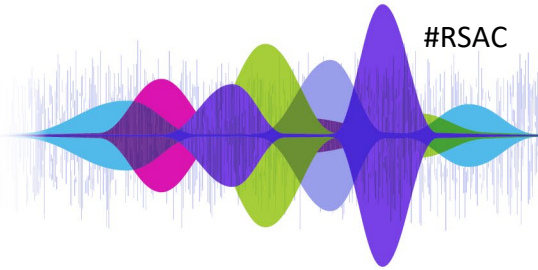
Start with the “who” – not the band!



- OS depends on a wide array of people from big-name companies to unpaid maintainers.
- Reasons people start an OS project varies – as does their own motivation for monitoring and maintaining it.
- It is not all developers, people across disciplines are part of open source.
- Often succession planning isn’t ”a thing” – how to deal with the **bus factor.**
- and most importantly….

Open Source doesn't [always] mean

"Community" Driven

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PRACTICES
More than Code – Looking Wider

Governance – Legal – Business Operations

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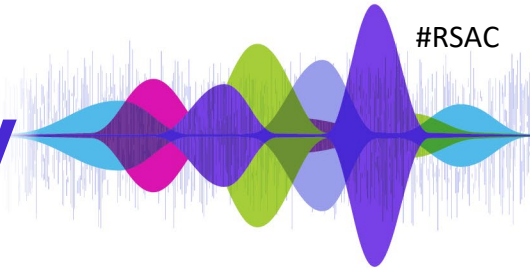
Governance: who makes the decision?

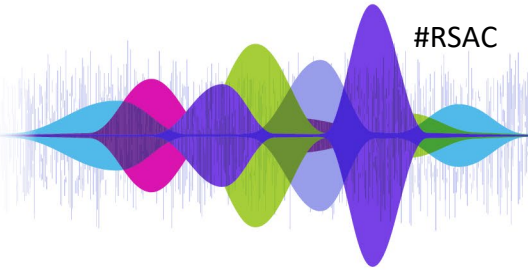
- **OSS isn't a democracy**—different projects have different power structures, and some none at all.
- **Different models mean different things**—do-ocracy, benevolent dictator for life, self-appointing councils or foundations, vendor-controlled
- **Enterprise due diligence**—maintenance, sustainability, leadership
- **Balancing the "spirit" of open source**—strategic lever, business priorities, "smoke and mirrors," internal conflicts, and more.

Legal: Licenses, Restrictions, and Security



- **Licensing isn't just legal red tape**—it shapes the project in many ways: use, modifications, sustainability, security.
  - MIT, Apache 2.0, BSD – permissive-> few restrictions, but little control over security
  - GPL – restricted-> requires code-sharing, some avoid it due to legal complexity
  - Business Source License (BSL) & Source-Available Model-> protest business interests but aren't truly OS.
- **Security risks in licensing incompatibility**—some knowingly combine OS components under conflicting licenses
- **Lack of enforcement**—difficult for many projects keep on top of violators.

Operations: Business Interests Behind OSS



- **OS isn’t always a passion project**—it is often driven by business goals, sponsorships, etc.
- **Security and sustainability tradeoff**—keeping funding going and business priorities.
- **New technologies**—AI-generated OS code introduces new concerns around security as well as opportunities.
- **Contingency planning**—how reliant is your organization (product or infrastructure) on OS? Do you have a back up plan?

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If you require high security from OSS, are you investing in the projects you use?

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PARTNERSHIPS
Securing Open Source Software

**The future isn't just about individual projects—
it's about the ecosystem.**

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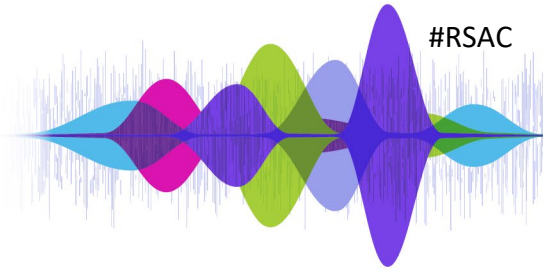
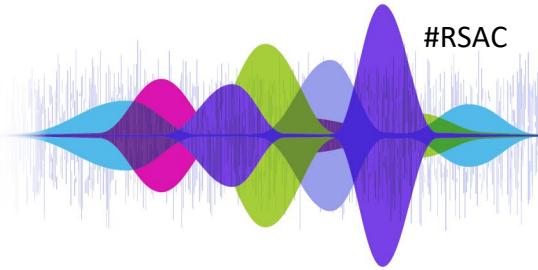
Finding Ways to Play Well Together: OS Projects, Enterprises, and Government



- Open source is a shared resource, but no single entity is fully responsible for its security.
- “Communities” can be seen, measured, and heard, don’t assume they always exist.
- The biggest users of OSS (governments & corporations) contribute the least.
- Guardrails make some feel better–-what is the risk to the foundational tenants of open source?

Thinking Towards the Future



- Building trust, conversation and collaboration is an evolving process not a destination.
- Not all OS projects are the same, therefore the partnerships with large enterprises and governments will be different.
- Navigating advancing technologies (e.g. AI, LLMs, ML) through the eyes of OS is shifting the conversation(s).
- OS isn't a *nice to have*, it's deeply embedded across the technology stack.
- OSINT and other resources growing in popularity to help manage risks.

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Let's Apply It…
Adopt a New Mindset Today

People, Practices, and Partnerships

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Reframe your own thinking... and share!

- **Security Requires More Than Just Code Fixes**
  - It's shaped by who runs the project, how it's governed, and how it's funded - find out who maintains it, how it's funded, what happens when things go bad.
- **Build in OS Due Diligence**
  - Before adopting OS, do your homework - ask yourself and the project hard questions about governance, funding, and sustainability.
- **Take a Seat -- Get Involved in OS Beyond Just Using It**
  - Support OS through direct funding, hiring maintainers, contributing code, volunteer your expertise, join working groups, initiatives, and OSS governance discussions.

What to start with today…

- **ASK:** What OS tools does our organization rely on? Start the conversation internally.
- **EMBRACE:** The OS mindset—think about governance, security, and sustainability.
- **PLAN:** What if a critical OS component disappears tomorrow? How would that impact your organization?
- **RETHINK:** If OS is part of your software supply chain, how does that shift internal risk and procurement discussions?
- **ENGAGE:** Reach out to project owners and maintainers—many are eager to collaborate with users and integrators.

AND….

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Recognize that every open source project is different and the security of it is a shared responsibility—

it requires commitment, not just consumption.

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TRUST

(and confidence)
comes with knowing
who's behind the code.

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Questions and Thank You!

Let's Connect: Dr. Kelley Misata

Join the Suricata community: https://suricata.io/